

. CLAIMS .

1. A server for registering a terminal apparatus if a communication time between the server and the terminal apparatus is less than or equal to a reference value, and
5 providing content to the registered terminal apparatus, comprising:

a measuring unit operable to measure the communication time, being a time period from transmitting measuring information to an unregistered terminal apparatus until
10 receiving response information from the unregistered terminal apparatus, and repeat the transmission, the reception, and the measurement until the measured communication time is less than or equal to the reference value;

15 an elapsed-time measuring unit operable to measure an elapsed time from when the measuring unit first begins measuring the communication time; and

a transmission unit operable, while the transmission, the reception, and the measurement are being repeated, to
20 transmit, to the unregistered terminal apparatus, status notification information showing a processing status which depends on the elapsed time.

2. The server of claim 1, wherein the transmission unit
25 includes:

a storage subunit operable to store a plurality of messages showing a processing status which depends on an elapsed time, the messages being in one to one correspondence

with elapsed times; . . .

a selection subunit operable to select from the storage subunit a message which corresponds to the measured elapsed time; and

5 a transmission subunit operable to transmit the selected message to the unregistered terminal apparatus as the status notification information.

3. The server of claim 1, wherein the transmission unit
10 includes:

a storage subunit operable to store pieces of identification information corresponding to messages held in the unregistered terminal apparatus, the pieces of identification information being in one to one
15 correspondence with elapsed times;

a selection subunit operable to select a piece of identification information which corresponds to the measured elapsed time; and

a transmission subunit operable to transmit the
20 selected piece of identification information, and

the selected piece of identification information is the status notification information.

4. The server of claim 1, wherein the status notification
25 information is one of a plurality of elapsed times which are in one to one correspondence with a plurality of messages held in the unregistered terminal apparatus.

5. The server of claim 1, further comprising:

a registration unit operable, when the communication time is less than or equal to the reference value, to register the unregistered terminal apparatus in correspondence with

5 a validity period; and

an extension unit operable to perform extension processing to extend the validity period,

wherein the extension unit includes

a control subunit operable to control the measuring
10 unit to repeat the transmission, the reception, and the measurement, and

an extension subunit operable to extend the validity period when the communication time is less than or equal to the reference value.

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6. The server of claim 5, wherein in a case of extension processing, the measuring unit uses a reference value that is greater than a reference value of a case of registering the unregistered terminal apparatus.

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7. The server of claim 5, further including a count unit operable to count a number of performed extensions, wherein as the number of performed extensions increases, the extension subunit lengthens a period of extension.

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8. The server of claim 5, wherein in a case of extension processing, the measuring unit attaches additional information to the measuring information, the additional

information indicating that the measuring information is to be transmitted over a communication route between the server and the registered terminal apparatus with priority over other information.

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9. The server of claim 5, wherein the extension unit prioritizes performing the extension processing over other processing if a remaining duration of the validity period is less than a predetermined reference value.

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10. The server of claim 5, wherein

the server is a computer with an on-board microprocessor and further includes an idle-time detection unit operable to detect idle time when the server is not performing other processing, and

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the extension unit performs the extension processing during the detected idle time.

11. A terminal apparatus for using content and to be registered in a server holding content, comprising:

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a reception unit operable to receive measuring information from the server of claim 1;

a transmission unit operable to transmit response information to the server when the measuring information is received; and

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a display unit operable to display a message based on status notification information received from the server.

12. The terminal apparatus of claim 11, wherein if additional information is attached to the measuring information, the additional information indicating that a transmission of information is prioritized over other processing on a communication route between the server and the terminal apparatus, the transmission unit attaches the additional information to the response information.

13. The terminal apparatus of claim 11, further comprising a management unit operable, when the terminal apparatus is registered in the server, to manage a validity period for which the terminal apparatus is registered in the server, wherein

if a remaining duration of the validity period is less than a preconfigured reference value, and when the measuring information is received, the transmission unit prioritizes transmitting the response information over other processing.

14. A device registration system constituted from a server holding content and a terminal apparatus which uses content, the terminal apparatus being registered in the server if a communication time between the server and the terminal apparatus is less than or equal to a reference value, wherein

the server includes:

a measuring unit operable to measure the communication time, being a time period from transmitting measuring information to the terminal apparatus until receiving response information from the terminal apparatus, and repeat

the transmission, the reception, and the measurement until the measured communication time is less than or equal to the reference value;

an elapsed-time measuring unit operable to measure an
5 elapsed time from when the measuring unit first begins measuring the communication time; and

a transmission unit operable to transmit, to the terminal apparatus, status notification information showing a processing status which depends on the elapsed time, and

10 the terminal apparatus includes:

a response unit operable to receive measuring information from the server, and transmit response information to the server when the measuring information is received; and

15 a display unit operable to display a message based on status notification information received from the server.

15. A registration method used in a server which registers a terminal apparatus if a communication time between the
20 server and the terminal apparatus is less than or equal to a reference value, comprising the steps of:

measuring, using a measuring unit, the communication time, being a time from transmitting measuring information to the terminal apparatus until receiving response
25 information from the terminal apparatus, and repeating the transmission, the reception, and the measurement until the measured communication time is less than or equal to the reference value;

measuring, using an elapsed time measuring unit, an elapsed time from when the measuring unit first begins measuring the communication time; and

transmitting to the terminal apparatus, using a
5 transmitting unit and while the transmission, the reception, and the measurement are being repeated, status information showing a processing status which depends on the elapsed time.

10 16. A registration program used in a server which registers a terminal apparatus if a communication time between the server and the terminal apparatus is less than or equal to a reference value, comprising the steps of:

measuring, using a measuring unit, the communication
15 time, being a time from transmitting measuring information to the terminal apparatus until receiving response information from the terminal apparatus, and repeating the transmission, the reception, and the measurement until the measured communication time is less than or equal to the
20 reference value;

measuring, using an elapsed time measuring unit, an elapsed time from when the measuring unit first begins measuring the communication time; and

transmitting to the terminal apparatus, using a
25 transmitting unit and while the transmission, the reception, and the measurement are being repeated, status information showing a processing status which depends on the elapsed time.

17. A recording medium which is computer-readable and has recorded thereon a registration program used in a server which registers a terminal apparatus if a communication time
5 between the server and the terminal apparatus is less than or equal to a reference value, the registration program comprising the steps of:

measuring, using a measuring unit, the communication time, being a time from transmitting measuring information
10 to the terminal apparatus until receiving response information from the terminal apparatus, and repeating the transmission, the reception, and the measurement until the measured communication time is less than or equal to the reference value;

15 measuring, using an elapsed time measuring unit, an elapsed time from when the measuring unit first begins measuring the communication time; and

transmitting to the terminal apparatus, using a transmitting unit and while the transmission, the reception,
20 and the measurement are being repeated, status information showing a processing status which depends on the elapsed time.